CLAIMS

What is claimed is:

1. A method comprising:

acquiring data representing eye movements for multiple individuals;

generating result data describing a visual representation of the eye movements for the multiple individuals, wherein the visual representation corresponds to aggregate eye movement data for the multiple individuals; and

promoting the result data to a user-accessible state.

2. The method of claim 1 wherein promoting the result data to a user-accessible state comprises displaying the result data with a display device.

3. The method of claim 1 wherein promoting the result data to a user-accessible state comprises storing the result data on an electronically-accessible medium.

4. The method of claim 1 wherein the visual representation describes as least part of a visual scene viewed by the multiple individuals that has been visually altered based on the data representing the eye movements for the multiple individuals.

5. The method of claim 4 further comprising aggregating the individual eye tracking data for two or more individuals resulting in aggregate eye tracking data prior to generating the visual representation, wherein the visual representation is altered based on the aggregate eye tracking data.

6. The method of claim 4 wherein generating result data describing a visual representation of the eye movements for the multiple individuals comprises generating result data describing a difference between a selected subset of the multiple individuals and the remaining multiple individuals.

7. The method of claim 1 wherein the eye movements of the multiple individuals corresponds to the multiple individuals reading information from a display device of an electronic system.

8. The method of claim 1 wherein the visual altering comprises blurring the visual representation based on a visual acuity gradient.

9. The method of claim 1 wherein the visual altering comprises alpha blending of the visual representation and a colorized representation of the data representing the eye movements for the multiple individuals.

10. The method of claim 1 wherein the visual altering comprises altering regions of the visual scene not viewed by an individual.

11. The method of claim 1 further comprising providing representations of one or more predetermined states of one or more users in the visual representation.

12. The method of claim 11 wherein the predetermined states comprise one or more of: a cursor control selection, a gaze start point, a gaze stop point, pupil data, gaze duration, biofeedback indicators, and mental state.

13. The method of claim 1 wherein tracking eye movements of individuals comprises determining a mental state by matching one or more eye movement patterns to one or more eye behavior pattern templates.

14. A graphical representation of eye tracking data created according to the method of claim 1.

15. An article comprising an electronically-accessible medium having stored thereon data corresponding to a graphical representation created according to the method of claim 1.

16. An article comprising an electronically-accessible medium to provide instructions that, when executed, cause one or more electronic systems to:

acquire data representing eye movements for multiple individuals;

generate result data describing a visual representation of the eye movements for the multiple individuals, wherein the visual representation corresponds to aggregate eye movement data for the multiple individuals; and

promote the result data to a user-accessible state.

17. The article of claim 16 wherein the instructions that cause the one or more electronic systems to promote the result data to a user-accessible state comprises instructions that, when executed, cause the one or more electronic systems to display the result data with a display device.

18. The article of claim 16 wherein the instructions that cause the one or more electronic systems to promote the result data to a user-accessible state comprises instructions that, when executed, cause the one or more electronic systems to store the result data on an electronically-accessible medium.

19. The article of claim 16 wherein the visual representation describes as least part of a visual scene viewed by the multiple individuals that has been visually altered based on the data representing the eye movements for the multiple individuals.

20. The article of claim 19 further comprising instructions that, when executed, cause the one or more electronic systems to aggregate the individual eye tracking data for two or more individuals resulting in aggregate eye tracking data prior to generating the visual representation, wherein the visual representation is altered based on the aggregate eye tracking data.

21. The article of claim 16 wherein the eye movements of the multiple individuals corresponds to the multiple individuals reading information from a display device of an electronic system.

22. The article of claim 16 wherein the instructions that cause the one or more electronic systems to generate result data describing a visual representation of the eye movements for the multiple individuals comprises instructions that, when executed, cause the one or more electronic systems to generate result data describing a difference between a selected subset of the multiple individuals and the remaining multiple individuals.

23. The article of claim 16 wherein the visual altering comprises blurring the visual representation based on a visual acuity gradient.

24. The article of claim 16 wherein the visual altering comprises alpha blending of the visual representation and a colorized representation of the data representing the eye movements for the multiple individuals.

25. The article of claim 16 wherein the visual altering comprises altering regions of the visual scene not viewed by an individual.

26. The article of claim 16 further comprising instructions that, when executed, cause the one or more electronic systems to provide representations of one or more predetermined states of one or more users in the visual representation.

27. The article of claim 26 wherein the predetermined states comprise one or more of: a cursor control selection, a gaze start point, a gaze stop point, pupil data, gaze duration, biofeedback indicators, and mental state.

28. The article of claim 16 wherein tracking eye movements of individuals comprises determining a mental state by matching one or more eye movement patterns to one or more eye behavior pattern templates.

29. A method comprising:

acquiring data representing eye movements for one or more individuals;

generating result data that graphically represents the data representing eye movements for the one or more individuals; and

promoting the result data to a user-accessible state.

30. The method of claim 29 wherein promoting the result data to a user-accessible state comprises displaying the result data with a display device.

31. The method of claim 29 wherein promoting the result data to a user-accessible state comprises storing the result data on an electronically-accessible medium.

32. The method of claim 29 wherein the result data that graphically represents the data representing eye movements for the one or more individuals comprises blurring

an image based on a visual acuity gradient applied to the data representing eye movements.

33. The method of claim 29 wherein the result data that graphically represents the data representing eye movements for the one or more individuals comprises alpha blending of an image and a colorized representation of the data representing the eye movements.

34. An article comprising an electronically-accessible medium to provide instructions that, when executed, cause one or more electronic systems to:

acquire data representing eye movements for one or more individuals;

generate result data that graphically represents the data representing eye movements for the one or more individuals; and

promot the result data to a user-accessible state.

35. The article of claim 34 wherein promoting the result data to a user-accessible state comprises displaying the result data with a display device.

36. The article of claim 34 wherein promoting the result data to a user-accessible state comprises storing the result data on an electronically-accessible medium.

37. The article of claim 34 wherein the result data that graphically represents the data representing eye movements for the one or more individuals comprises blurring

an image based on a visual acuity gradient applied to the data representing eye movements.

38. The article of claim 34 wherein the result data that graphically represents the data representing eye movements for the one or more individuals comprises alpha blending of an image and a colorized representation of the data representing the eye movements.

39. A method comprising:

acquiring data representing eye movements for multiple individuals;

generating result data describing a visual representation of the eye movements for the multiple individuals; and

modifying the visual scene based, at least in part, on the result data.

40. The method of claim 39 wherein the eye movements of the multiple individuals corresponds to the multiple individuals reading information from a display device of an electronic system.

41. The method of claim 39 wherein modifying the visual scene comprises modifying a layout of a Web page that provides the visual scene.

42. The method of claim 39 wherein modifying the visual scene comprises modifying a layout of an application program that provides the visual scene.

43. An article comprising an electronically-accessible medium to provide instructions that, when executed, cause one or more electronic systems to:

acquire data representing eye movements for multiple individuals;

generate result data describing a visual representation of the eye movements for the multiple individuals; and

modify the visual scene based, at least in part, on the result data.

44. The article of claim 43 wherein the eye movements of the multiple individuals corresponds to the multiple individuals reading information from a display device of an electronic system.

45. The article of claim 43 wherein modifying the visual scene comprises modifying a layout of a Web page that provides the visual scene.

46. The article of claim 43 wherein modifying the visual scene comprises modifying a layout of an application program that provides the visual scene.